1: Alzheimer Dis Assoc Disord. 1995 Summer;9(2):61-7.



# Substantia nigra lesions in Alzheimer disease and normal aging.

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Clinical and pathological overlap between Alzheimer disease (AD) and Parkinson's disease (PD) has been well described; however, the mechanisms of overlap between these two disorders remain unknown. We retrospectively examined clinical and neuropathological features from 66 individuals participating in the Rochester Alzheimer Disease Center to determine the association of AD with substantia nigra (SN) pathology. SN pathology, identified by a loss of pigmented neurons and the presence of gliosis, pigment-laden macrophages, and Lewy bodies, was blindly scored in 48 AD cases and 18 normal elderly controls. We found moderate or severe pathology in the SN in 2 control brains (11%) and 29 AD brains (60%). The numbers of neocortical and hippocampal neurofibrillary tangles (NFTs) and senile plaques (SPs) were not associated with nigral pathology. There was also no significant association of SN pathology with NFTs or SPs in the striatum, the site to which these neurons project. There was no significant association of increasing SN pathology with aging among AD patients, nor with increasing severity and duration of AD. The signs and symptoms of an extrapyramidal movement disorder were, however, associated with increasing SN pathology. We confirm that pathological lesions in the SN are a common feature of AD and an uncommon feature in normal aging. AD is a significant risk factor for SN lesions and PD, but the pathologic severity of AD, as measured by NFTs and SPs, was not associated with SN lesions.

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